Municipal and County Engineering
INDEX

VOLUME LXVI — JANUARY—JUNE, 1924

Capital Letter E refers to Editorials.

Accidents, Highway, in Pennsylvania, A Study of, by W. A. Van Duzer 6
Accounting of Municipal Public Utilities, by Allen Munn 40
Accidents, Highway Traffic, Classification and Causes of, by N. M. Isabella 133
Advertising Value of Community Recreation, by Eugene T. Lies 144
Agent, Real Estate, The City, E. 201
Asphalt, Kentucky Rock, Surfacing Fall Creek Boulevard, Indianapolis, With 9
Asphalt Mixture Design, Sheet, Present Status of, by M. F. Macnaughton 190
Asphalt Pavements, The Design and Construction of, by Prevost Hubbard 221
Asphalt Plant, Portable, New Two-Unit 46

Bases, Concrete Pavement, A Study of Crushing and Heaving of, by Roy M. Green 216
Bethlehem, Pa., Design and Construction of The Hill-to-Hill Bridge, by Frank W. Skinner 286
Bidder's Bond Vs. Certified Checks at Highway Lettings, by A. E. Horst 236
Bidding and Bonding of Professional Engineers 231
Bituminous Mixture Design, A Criticism of the Book "City Pavements" With Special Reference to, by Gene Abson 54
Bituminous Surface Treatments and Bituminous Macadam Pavements Under Modern Traffic, Limitations of, by I. W. Patterson .. 159
"Black Base" Construction in Mercer County, N. J., Experience With, by H. F. Harris 260
Boilers, Low-Pressure Heating, Relation of to Municipal Smoke Problem 178
Bonds as a Gauge of a Contractor's Responsibility, by N. F. Helmers 60
Bond Market, Municipal, Activity in 296
Bonded Indebtedness, Debt for Rural Highways But Small Part of Total 284
Bonding and Bidding of Professional Engineers 231
Bridges, Concrete, How to Pour, With Special Reference to Construction Joints, by A. R. Carter 229
Brick Highway Standards, New, Ohio Adopts .. 296
Brick Pavement at Clinton, Iowa, Performance of During Service of 32 Years, by Charles P. Chase 22
Brick Pavement, Designing to Fit Local Conditions at Mt. Olive, Ill., by Willis D. P. Warren 16
Brick, Vitrified Paving, Recognized Types and Sizes of Reduced from Six to Five 197
Bridge Design, Highway, Outstanding Problems in, by E. F. Kelley 126
Bridge, Hill-to-Hill, Bethlehem, Pa., Design and Construction of the, by Frank W. Skinner 286
Booster Pumps vs. Portable Pumpers, E 182
Business in This Presidential Year, E 2

Capacities, Carrying, of Pipe Culverts, Data on 264
Care and Maintenance of Contractors' Equipment, by R. E. Brooks 248
Centralization of Power Development, The Tendency Toward, by W. L. Abbott 165
Central Plant Highway Maintenance—Possibilities for Large Concentrated Mileage, by Leroy C. Smith 51
Certified Checks vs. Bidder's Bond at Highway Lettings, by A. E. Horst 236
Chicago, Double Decked, South Water Street Improvement in, by Paul E. Green 4
Chicago, The Sewage Problem of the Santitary District of, by Langdon Pearse 281
Chlorination, Over, of Water for Taste Control, by W. B. Bushnell 266
"City Pavements," A Criticism of the Book, With Special Reference to Bituminous Mixture Design, by Gene Abson 54
City Planning Program, How a Committee of Citizens Can Secure Support for, by John Nolen 238
City Real Estate Agent, The, E 201
Cleaning, Water Main, at New Albany, Indiana, by J. O. Endris 271
Clinton, Iowa, Performance of Brick Pavement During Service of 32 Years at, by Charles P. Chase 22
Co-efficient of Run-Off in Storm Sewer Design, by Le Roy K. Sherman 297
Community Recreation, Advertising Value of, by Eugene T. Lies 144
Competition as a Regulator in Transportation, E. 49
Competition, Transportation, Co-operation and Co-ordination, E. 202
Competition vs. Co-operation in Transportation Service, by Frank Haigh Dixon 210
Completion of Passaic Valley Sewer, by Ralph Van Duyne 268
Concrete Bridges, How to Pour, with Special Reference to Construction Joints, by A. R. Carter 229
Concrete Highways, Tentative Conclusions on the Design of, by Clifford Older 103
Concrete Pavement Bases, A Study of Crushing and Heaving of, by Roy M. Green 216
Concrete Pavement Slabs, Results of Recent Tests on, by Leslie W. Teller 257
Concrete Paving, Increased Use of Expansion Joints in, by C. V. R. Fullenwider 25
Concrete, Resurfacing Old Pavement with, at Terre Haute, Ind. 33
Concrete Road Cracks, Successful Trial of White Joint Filler for, by L. G. Carmick 263
Co-operation, Co-ordination and Transportation Competition, E. 202
Co-operation vs. Competition in Transportation Service, by Frank Haigh Dixon 210
Consolidation, Railway, Reasons for 266
Construction Contracts, Uniform, Plea for, by R. C. Marshall, Jr. 292
Construction, Day Labor, Economic Aspects of, by Arthur S. Bent 71
Construction Equipment Standardization, Purpose and Progress of, by Clarence E. Bement. 86
Construction Industry, The, and Immigration, E. 181
Construction in Mercer County, N. J., Experience with "Black Base," by H. F. Harris ... 260
Construction Organization, Highway, Controlling Distant Units in a, by O. L. Kipp 82
Construction, Pipe Line, Use of Lead Substitutes for, by L. A. Geupel 243
Continuing Business, Highway Improvement a, by Thomas H. MacDonald 90
Contracting as a Business, E 49
Contracting, Highway, and Its Illusions, by T. J. Wasser 63
Contractors' Equipment, Care and Maintenance of, by R. E. Brooks 248
Contractors' Responsibility, Bonds as a Gauge of a, by N. F. Helmers 60
Contracts, Uniform Construction, Plea for, by R. C. Marshall, Jr. 292

Controlling Distant Units in a Highway Construction Organization, by O. L. Kipp..... 82
Cost and Methods of Snow Removal, by Frank F. Rogers 12
Costs, Road Maintenance, Suggested Improvements in Construction Procedure to Reduce, by H. S. Perry..... 7
Criticism of the Book, "City Pavements," With Special Reference to Bituminous Mixture Design, A, by Gene Abson..... 54
Culvert Design, Discussion on: An Important Hydraulic Factor in..... 56
Culverts, Pipe, Data on Carrying Capacities of 264

Day Labor Construction, Economic Aspects of, by Arthur S. Bent..... 71
Debt for Rural Highways But Small Part of Total Bonded Indebtedness..... 284
Design and Construction of Asphalt Pavements, The, by Prevost Hubbard..... 221
Design and Construction of Sand Asphalt Pavements, by Sam R. Murray..... 253
Design, Culvert, Discussion on: An Important Hydraulic Factor in..... 56
Design, Highway Bridge, Outstanding Problems in, by E. F. Kelley..... 126
Design of Concrete Highways, Tentative Conclusions on the, by Clifford Older..... 103
Design of Relief Sewers, The, by A. W. Consoer 88
Designing Swimming Pools with Reference to Operation and Sanitation, by Jack J. Hinman, Jr. 77
Developments, Indianapolis, in Garbage Reduction, by E. W. McCullough..... 125
Diesel Engine in City Service Establishes a Non-Stop Record of 202 Days..... 102
Double-Decked, South Water Street Improvement in Chicago, by Paul E. Green..... 4
Drain Construction, Segment-Block Tile, by W. A. Olson 101
Dynamiting, Successful, at 35 Degrees Below Zero 53

Economic Aspects of Day Labor Construction, by Arthur S. Bent..... 71
Economical Construction and Maintenance of Gravel Roads, by John H. Mullen..... 186
Electric Light and Water Utilities for French Lick and West Baden, Indiana, by Charles Brossman 111
Electric Service, Making Equitable Rates for, by W. J. Greene and E. A. Holloway..... 97
Engine, A Diesel, in City Service, Establishes a Non-Stop Record of 202 Days..... 102
Engineer as an Expert Witness, The, by Charles H. Young..... 93
Engineer's First Job, The Young, E..... 181
Engineers, Professional, Bidding and Bonding of 231
Engineers, Professional Statistics Show Increase of, E. 201
Engineering Standards for Municipal Fire Fighting Facilities, The Establishment of, by Clarence Goldsmith..... 301
Equipment, Contractors', Care and Maintenance of, by R. E. Brooks..... 248
Equipment, Organization and Methods for Snow Removal, by Edward E. Reed..... 69
Equipment Standardization, Construction, Purpose and Progress of, by Clarence E. Bement 86
Expansion Joints in Concrete Paving, Increased Use of, by C. V. R. Fullenwider..... 25
Expert, Real Estate, What a, Can Do for a City, by Edward Grieb..... 219
Expert Witness, The Engineer as an, by Charles H. Young..... 93

Federal and State Policies in the Construction of the Federal Aid Highway System, by Thomas H. MacDonald..... 171
Fertilizer, Safe Use of Sewage Sludge for, by Abel Wolman 285
Filler, White Joint, Successful Trial of, for Concrete Road Cracks, by L. G. Carmick.... 263
Financing Highway Construction and Maintenance, The Tendency of Recent Legislation in Regard to, by J. N. Mackall..... 26
Fire Fighting Facilities, Municipal, The Establishment of Engineering Standards for, by Clarence Goldsmith 301
Fire Protection of Small Municipalities and the Water Works, by Charles W. Parsons..... 183
First Job, The Young Engineer's, E..... 181
Fordson Tractors, New Rotary Snow Plow for 43
Foundations and Wearing Surface Layers, Pavement, Road and Street Subsoils in Respect to, by J. W. Howard..... 11
French Lick and West Baden, Indiana, Electric Light and Water Utilities for, by Charles Brossman 111
Fuel Oil, Production of Gas for Municipal Use from, by C. W. Arlitt..... 198

Garbage Reduction, Indianapolis Developments in, by E. W. McCullough..... 125
Gary (Indiana) Water Works, Operating Features of the, by William Luscombe..... 155
Gasoline Bus and Trackless Trolley at Toledo, Ohio, Comparison of Costs of, by W. E. Cann 259
Gas for Municipal Use from Fuel Oil, Production of, by C. W. Arlitt..... 198
Gravel Pits in Wisconsin During 1923, Local, Use of, by H. J. Kuelling..... 30
Gravel Roads, Economical Construction and Maintenance of, by John H. Mullen..... 186
Gunite, Repairing Water and Sewer Works with, by L. B. Penhallow..... 149

Highway Accidents in Pennsylvania, A Study of, by W. A. Van Duzer..... 6
Highway Bridge Design, Outstanding Problems in, by E. F. Kelley..... 128
Highway Construction and Maintenance, Financing, The Tendency of Recent Legislation in Regard to, by J. N. Mackall..... 26
Highway Construction Organization, Controlling Distant Units in a, by O. L. Kipp..... 82
Highway Contracting and Its Illusions, by T. J. Wasser 63
Highway Department, Progressive, Service—The Slogan of the, by A. R. Hirst..... 150
Highway Department, State, Personnel, Loss and Waste Due to Frequent Changes in, by H. G. Shirley..... 23
Highway Development, Our Lagging, E..... 1
Highway Improvement a Continuing Business, by Thomas H. MacDonald..... 90
Highway Lettings, Bidder's Bond vs. Certified Checks at, by A. E. Horst..... 236
Highway Maintenance, Central Plant—Possibilities for Large Concentrated Mileage, by Leroy C. Smith..... 51
Highway Maintenance Procedure, Some Recommendations on 39
Highway System, State Trunk, Wisconsin's New 10,000 Mile, by J. T. Donaghey..... 116
Highway Traffic Accidents, Classification and Causes of, by N. M. Isabella..... 133
Highway Traffic, Our Increasing, E..... 201
Highway Transport, Much Hostility to, Results from Forcible Application of Misfit Theories, E. 49
Highways, Concrete, Tentative Conclusions on the Design of, by Clifford Older..... 103
Hill-to-Hill Bridge, Bethlehem, Pa., Design and Construction of the, by Frank W. Skinner 286
Hudson River Vehicular Tunnel, Lighting the. 148
Humboldt County, Iowa, Experience in Snow Removal in, by K. J. Smith..... 247
Hydraulic Factor in Culvert Design, An Important, Discussion on 56
Hydro-Electric Plant, The Largest in the West, Placed in Service..... 232

Ice and Frozen Ground, Breaking, Pneumatic Equipment for, by V. H. Van Diver..... 136
Illinois, Oiled Earth Roads in, by J. H. Reed. 141
Immigration and the Construction Industry, E. 181
Increasing Highway Traffic, Our, E..... 201
Increase of Engineers, Professional Statistics Show, E. 201
Indianapolis Developments in Garbage Reduction, by E. W. McCullough..... 125
Indianapolis, Surfacing Fall Creek Boulevard With Kentucky Rock Asphalt..... 9
Industry, The Construction, and Immigration, E. 181
Information, Your Judgment is No Better Than Your, by Monroe L. Patzig..... 32

628.05
V. 66

Iowa, Hamboldt County, Experience in Snow Removal in, by K. J. Smith..... 247

Joints, Construction, How to Pour Concrete Bridges with Special Reference to, by A. R. Carter 229
Judgment, Your, is No Better Than Your Information, by Monroe L. Patzig..... 33

Kentucky Rock Asphalt, Surfacing Fall Creek Boulevard, Indianapolis, with..... 9

Laboratory Control in Water Purification, by Jack J. Hinman, Jr..... 120
Lagging Highway Development, E..... 1
Largest Hydro-Electric Plant in the West Placed in Service, The..... 232
Lead Substitutes, Use of in Pipe Line Construction, by L. A. Geupel..... 243
Legislation, Recent, The Tendency of, in Regard to Financing Highway Construction and Maintenance 26
Lighting the Hudson River Vehicular Tunnel.. 148
Link Belt "Tark" Sewage Screen, New..... 46
Literature, Trade, Valuable.....42-180
Low-Pressure Heating Boilers, Relation of, to Municipal Smoke Problem..... 178

Main Cleaning, Water, at New Albany, Indiana, by J. O. Endris..... 271
Maintenance Costs, Road, Suggested Improvements in Construction Procedure to Reduce, by H. S. Perry..... 7
Maintenance, Highway, Central Plant—Possibilities for Large, Concentrated Mileage, by Leroy C. Smith..... 51
Maintenance Procedure, Highway, Some Recommendations on 39
Mercer County, N. J., Experience with "Black Base" Construction in, by H. F. Harris..... 260
Methods and Costs of Making Traffic Surveys, by George E. Hamlin..... 65
Methods and Cost of Snow Removal, by Frank F. Rogers 12
Misfit Theories, Much Hostility to Highway Transport Results from Forcible Application of 50
Mixture Design, Sheet Asphalt, Present Status of, by M. F. Macnaughton..... 190
Model Tax System, Discussion of Principles Underlying a 274
Mt. Olive, Ill., Designing Brick Pavement to Fit Local Conditions at, by Willis D. P. Warren 16
Municipal Bond Market, Activity in..... 296
Municipal Program, Planning a, by P. F. Hopkins 193
Municipal Public Utilities, Accounting of, by Allen Munn 40

Non-Stop Record of 202 Days, A Diesel Engine in City Service Establishes a..... 102

Ohio Adopts New Brick Highway Standards... 296
Oiled Earth Roads in Illinois, by J. H. Reed.. 141
Oil, Fuel, Production of Gas for Municipal Use from, by C. W. Arlitt..... 198
Operating Features of the Gary (Indiana) Water Works, by William Luscombe..... 155
Organization, Methods and Equipment for Snow Removal, by Edward E. Reed..... 69
Over-Chlorination of Water for Taste Control, by W. B. Bushnell..... 266

Paints and Painting for Structural Steel, by H. L. Maxwell 139
Passaic Valley Sewer, Completion of, by Ralph Van Duyne 268
Pavement at Clinton, Iowa, Brick, Performance of, During Service of 32 Years, by Charles P. Chase 22
Pavement Bases, Concrete, A Study of Crushing and Heaving of, by Roy M. Green..... 216
Pavement, Brick, Designing to Fit Local Conditions at Mt. Olive, Ill., by Willis D. P. Warren 16
Pavement Foundations and Wearing Surface Layers, Road and Street Subsoils in Respect to, by J. W. Howard..... 11
Pavement Life, Roughness as a Factor in, by A. T. Goldbeck 203
Pavement, Old, Resurfacing With Concrete at Terre Haute, Ind. 33
Pavement Slabs, Concrete, Results of Recent Tests on, by Leslie W. Teller..... 257
Pavements and Roads, Relation of the subgrade to Wearing Surface of, by Will P. Blair 95
Pavements, Asphalt, The Design and Construction of, by Prevost Hubbard..... 221
Pavements, Bituminous Surface Treatments and Bituminous Macadam, Limitations of, Under Modern Traffic, by I. W. Patterson... 159
Pavements, Sand Asphalt, Design and Construction of, by Sam R. Murray..... 253
Paving Activities of the Central Southwest, The, by H. C. Smith..... 20
Paving Brick, Vitrified, Recognized Types and Sizes of, Reduced from Six to Five..... 197
Paving, Concrete, Increased Use of Expansion Joints in, by C. V. R. Fullenwider..... 25
Penalties, Truck, Basing on Misinformation, E. 182
Pennsylvania, A Study of Highway Accidents in, by W. A. Van Duzer..... 6
Pennsylvania, Fixing the Ultimate Width of Highway Right-of-Way in, by William H. Connell 256
Personnel, State Highway Department, Loss and Waste Due to Frequent Changes in, by H. G. Shirley..... 23
Pipe Culverts, Data on Carrying Capacities of. 264
Pipe Line Construction, Use of Lead Substitutes in, by L. A. Geupel..... 243
Planning a Municipal Program, by P. F. Hopkins 193
Planning Program, City, How a Committee of Citizens Can Secure Support for, by John Nolen 238
Planning the Eventual Road, by Hugh J. Fixmer 3
Plant, Hydro-Electric, Largest in the West, Placed in Service 232
Pneumatic Equipment for Breaking Ice and Frozen Ground, by V. H. Van Diver..... 136
Policies in the Construction of the Federal Aid Highway System, Federal and State, by Thomas H. MacDonald 171
Portable Asphalt Plant, New Two-Unit..... 46
Portable Pumpers vs. Booster Pumps, E..... 182
Power Development, The Tendency Toward Centralization of, by W. L. Abbott..... 165
Presidential Year, Business in this, E..... 2
Principles Underlying a Model Tax System, Discussion of 274
Program, Municipal, Planning a, by P. F. Hopkins 193
Pumpers, Portable, vs. Booster Pumps, E..... 182
Pumps, Booster, Portable Pumpers vs., E..... 182
Purification, Water, Laboratory Control in, by Jack J. Hinman, Jr..... 120

Railway Consolidation, Reasons for..... 266
Rates for Electric Service, Equitable, Making, by W. J. Greene and E. A. Holloway..... 97
Real Estate Agent, The City, E..... 201
Real Estate Expert, What a, Can Do for a City, by Edward Grieb..... 219
Reasons for Railway Consolidation..... 266
Recommendations on Highway Maintenance Procedure, Some 39
Recreation, Community, Advertising Value of, by Eugene T. Lies..... 144
Relief Sewers, The Design of, by A. W. Consoer 88
Resurfacing Old Pavement with Concrete at Terre Haute, Ind. 33
Right-of-Way, Highway, Fixing the Ultimate Width of, in Pennsylvania, by William H. Connell 256
Road, Eventual, Planning the, by Hugh J. Fixmer 3
Road Maintenance Costs, Suggested Improvements in Construction Procedure to Reduce, by H. S. Perry..... 7
Road Salvaging Procedure in Wyoming..... 143
Roads and Pavements, Relation of the Subgrade to Wearing Surface of, by Will P. Blair 95
Roads, Gravel, Economical Construction and Maintenance of, by John H. Mullen..... 186
Roads, Oiled Earth, in Illinois, by J. H. Reed. 141

Roadway Construction, Warren, Review of the Quarter Century Development of, by George C. Warren 34
Rotary Snow Plow, New, for Fordson Tractors. 43
Roughness as a Factor in Pavement Life, by A. T. Goldbeck 203
Run-Off in Storm Sewer Design, Co-efficient in, by LeRoy K. Sherman..... 297
Rural Highways, Debt for, But Small Part of Total Bonded Indebtedness..... 284

Safe Use of Sewage Sludge for Fertilizer, by Abel Wolman 285
Salvaging, Road, Procedure in Wyoming..... 143
Sand Asphalt Pavements, Design and Construction of, by Sam R. Murray..... 253
Sanitation and Operation, Designing Swimming Pools with Reference to, by Jack J. Hinman, Jr. 77
Sanitary District of Chicago, The Sewage Problem of the, by Langdon Pearse..... 281
Segment-Block Tile Drain Construction, by W. A. Olson 101
Service—The Slogan of the Progressive Highway Department, by A. R. Hirst..... 150
Sewer and Water Works, Repairing with Gunite, by L. B. Penhallow..... 149
Sewer, Passaic Valley, Completion of, by Ralph Van Duyne 268
Sewers, Relief, The Design of, by A. W. Consoer 88
Sewage Problem of the Sanitary District of Chicago, by Langdon Pearse..... 281
Sewage Screen, Link-Belt, "Tark," New..... 46
Sewage Sludge for Fertilizer, Safe Use of, by Abel Wolman 285
Sheet Asphalt Mixture Design, Present Status of, by M. F. Macnaughton..... 190
Shooting Water Wells, Experiences in, by C. W. Varner 199
Slogan of the Progressive Highway Department—Service, by A. R. Hirst..... 150
Small Municipalities, Water Works and the Fire Protection of, by Charles W. Parsons.. 183
Smoke Problem, Municipal, Relation of Low-Pressure Heating Boilers to..... 178
Snow Plow Attachments for Tractors, New.... 44
Snow Plow, New Rotary, for Fordson Tractors 43
Snow Removal in Humboldt County, Iowa, Experience in, by K. J. Smith..... 247
Snow Removal, Methods and Cost of, by Frank F. Rogers 12
Snow Removal, Organization, Methods and Equipment for, by Edward E. Reed..... 69
South Water Street Improvement in Chicago, The Double-Decked, by Paul E. Green..... 4
Southwest, Central, The Paving Activities of the, by H. C. Smith..... 20
Standards, Brick Highway, Ohio Adopts New. 296
Standardization, Construction Equipment, Purpose and Progress of, by Clarence E. Bement . 86
State and Federal Policies in the Construction of the Federal Aid Highway System, by Thomas H. MacDonald 171
State Trunk Highway System, Wisconsin's New 10,000 Mile, by J. T. Donaghey..... 116
Steel, Structural, Paints and Painting for, by H. L. Maxwell 139
Storm Sewer Design, The Co-efficient of Run-Off in, by LeRoy K. Sherman..... 297
Structural Steel, Paints and Painting for, by H. L. Maxwell 139
Subgrade, Relation of the, to Wearing Surface of Roads and Pavements, by Will P. Blair. 95
Subsoils, Road and Street, in Respect to Pavement Foundations and Wearing Surface Layers, by J. W. Howard..... 11
Support for a City Planning Program, How a Committee of Citizens Can Secure, by John Nolen 238
Surface Treatments, Bituminous, and Bituminous Macadam Pavements, Limitations of, Under Modern Traffic, by I. W. Patterson... 159
Surveys, Traffic, Methods and Costs of Making, by George E. Hamlin..... 65
Swimming Pools, Designing with Reference to Operation and Sanitation, by Jack J. Hinman, Jr. 77

"Tark" Sewage Screen, Link-Belt, New..... 46
Tax System, Model, Discussion of Principles Underlying a 274
Tests on Concrete Pavement Slabs, Recent, Results of, by Leslie W. Teller..... 257
Tile Drain Construction, Segment-Block, by W. A. Olson 101
Toledo, Ohio, Comparison of Costs of Trackless Trolley and Gasoline Bus at, by W. E. Cann 259
Trackless Trolley and Gasoline Bus at Toledo, Ohio, Comparison of Costs of, by W. E. Cann 259
Tractors, New Snow Plow Attachments for... 44
Traffic Accidents, Highway, Classification and Causes of, by N. M. Isabella..... 133
Traffic, Highway, Our Increasing, E..... 201
Traffic Surveys, Methods and Costs of Making, by George E. Hamlin..... 65
Transport, Highway, Much Hostility to Results from Forcible Application of Misfit Theories, E. 49
Transportation, Competition as a Regulator in, E. 49
Transportation Competition, Co-operation and Co-ordination, E. 202
Transportation Service, Co-operation vs. Competition in, by Frank Haigh Dixon..... 210
Trade Literature, Valuable 42-180
Truck Penalties, Basing on Misinformation, E. 182
Tunnel, Hudson River Vehicular, Lighting the. 148
Two-Unit Portable Asphalt Plant, New..... 46

Ultimate Width of Highway Right-of-Way in Pennsylvania, Fixing the, by William H. Connell 256
Uniform Construction Contracts, Plea for, by R. C. Marshall, Jr..... 292
Utilities, Municipal Public, Accounting of, by Allen Munn 40

Vitrified Paving Brick, Recognized Types and Sizes of, Reduced from Six to Five..... 197

Warren Roadway Construction, Review of the Quarter Century Development of, by George C. Warren 34
Water and Electric Light Utilities for French Lick and West Baden, Indiana, by Charles Brossman 111
Water and Sewer Works, Repairing with Gunite, by L. B. Penhallow..... 149
Water Main Cleaning at New Albany, Indiana, by J. O. Endris..... 271
Water, Over-Chlorination of, for Taste Control, by W. B. Bushnell..... 266
Water Purification, Laboratory Control in, by Jack J. Hinman, Jr..... 120
Water Wells, Experiences in Shooting, by C. W. Varner 199
Water Works and the Fire Protection of Small Municipalities, by Charles W. Parsons..... 183
Water Works, Gary, Indiana, Operating Features of the, by William Luscombe..... 155
Wells, Water, Experiences in Shooting, by C. W. Varner 199
White Joint Filler for Concrete Road Cracks, Successful Trial of, by L. G. Carmick..... 263
Wisconsin's New 10,000 Mile State Trunk Highway System, by J. T. Donaghey..... 116
Wisconsin, Use of Local Gravel Pits in, During 1923, by H. J. Kuelling..... 30
Witness, The Engineer as an Expert, by Charles H. Young 93
Wyoming, Road Salvaging Procedure in..... 143